	Application No.	Applicant(s)
Notice of Allowability	09/275,766	HERMANSEN ET AL.
	Examiner	Art Unit
	Joon H. Hwang	2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *a telephone communication with Brian J. Dorini (Reg. No. 43,594) on 2/4/05*.

2. ☒ The allowed claim(s) is/are *31-72 and 112 (renumbered as 1-43)*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

      1) ☐ hereto or 2) ☒ to Paper No./Mail Date *10*.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date *7/12/04*

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

JEAN M. CORRIELUS
PRIMARY EXAMINER

DETAILED ACTION

1.   The applicants elected Group I, claims 31-74 and 112, without traverse in the

amendment received on 8/5/04.

EXAMINER'S AMENDMENT

2.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

3.   Authorization for this examiner's amendment was given in a telephone interview

with Brian J. Dorini (Reg. No. 43,594) on 2/4/05.

4.   The application has been amended as follows:

Rewrite claim 31 as follows:

"31. A computer-implemented method of comparing input names and a stored

names, the method comprising:

accessing an input name of a particular human culture;

accessing a stored name of the particular human culture;

selecting a first linguistic algorithm based on the stored name and other names in

the particular human culture, wherein the first linguistic algorithm is based on one or

more linguistic features including one or more of phonological features, orthographic

features, semantic features, syntactic features, n-gram based features, the number of

elements in names, the types of elements in names, variations in spelling of a name, accounting for exclusion of expected information in a name, positional information of names, inclusion of additional information in a name, and whether surnames match;

selecting a second linguistic algorithm, different from the first linguistic algorithm, based on the stored name and other names in the particular human culture, wherein the second linguistic algorithm is based on one or more linguistic features including one or more of phonological features, orthographic features, semantic features, syntactic features, n-gram based features, the number of elements in names, the types of elements in names, variations in spelling of a name, accounting for exclusion of expected information in a name, positional information of names, inclusion of additional information in a name, and whether surnames match, wherein the first linguistic algorithm and the second linguistic algorithm are based on different linguistic features of the particular human culture;

comparing the input name and the stored name using the first linguistic algorithm;

comparing the input name and the stored name using the second linguistic algorithm; and

providing a non-binary indication of whether the input name matches the stored name based on (i) the comparing of the input name and the stored name using the first linguistic algorithm and (ii) the comparing of the input name and the stored name using the second linguistic algorithm."

Rewrite claim 32 as follows:

"32. The method of claim 31 wherein selecting the first linguistic algorithm

comprises:

selecting a set of algorithms based on names in the particular culture, the set of

algorithms being selected from among multiple sets of algorithms, each set of

algorithms being based on names in a different culture; and

selecting the first linguistic algorithm from the set of algorithms."

Rewrite claim 33 as follows:

"33. The method of claim 31 wherein selecting the first linguistic algorithm

comprises selecting the first linguistic algorithm from among multiple algorithms, each

algorithm being based on names in a different culture."

Rewrite claim 35 as follows:

"35. The method of claim 31 further comprising:

accessing a second stored name of the particular culture;

comparing the input name and the second stored name using the first linguistic

algorithm; and

providing an indication of whether the input name matches the second stored

name based on the comparing of the input name and the second stored name."

Rewrite claim 47 as follows:

"47. The method of claim 31 wherein the first linguistic algorithm is based on a

naming convention in the particular culture, and comparing comprises comparing using

the first linguistic algorithm that is based on the naming convention."

Rewrite claim 55 as follows:

"55. The method of claim 31 wherein comparing the input name and the stored

name using the first linguistic algorithm comprises comparing phonological similarity of

the input name and the stored name."

Rewrite claim 56 as follows:

"56. The method of claim 31 wherein comparing the input name and the stored

name using the first linguistic algorithm comprises comparing orthographic similarity of

the input name and the stored name."

Rewrite claim 57 as follows:

"57. The method of claim 31 wherein comparing the input name and the stored name using the first linguistic algorithm comprises comparing syntax of elements of the input name and elements of the stored name."

Rewrite claim 58 as follows:

"58. The method of claim 31 wherein comparing the input name and the stored name using the first linguistic algorithm comprises comparing semantic equivalence of the input name and the stored name."

Rewrite claim 59 as follows:

"59. The method of claim 56 wherein comparing the input name and the stored name using the first linguistic algorithm comprises performing an n-gram analysis of the input name and the stored name."

Rewrite claim 62 as follows:

"62. The method of claim 31 wherein comparing the input name and the stored name using the first linguistic algorithm comprises comparing discrepancy in number of elements of the input name and the stored name."

Rewrite claim 63 as follows:

"63. The method of claim 31 wherein comparing the input name and the stored name using the first linguistic algorithm comprises accounting for variations in spelling of the input name or the stored name."

Rewrite claim 64 as follows:

"64. The method of claim 31 wherein comparing the input name and the stored name using the first linguistic algorithm comprises accounting for exclusion of expected information in the input name or the stored name."

Rewrite claim 65 as follows:

"65. The method of claim 31 wherein comparing the input name and the stored name using the first linguistic algorithm comprises comparing positional information of the input name and the stored name."

Rewrite claim 66 as follows:

"66. The method of claim 31 wherein comparing the input name and the stored name using the first linguistic algorithm comprises accounting for inclusion of additional information in the input name or the stored name."

Cancel claim 73.

Cancel claim 74.

Rewrite claim 112 as follows:

"112. An apparatus comprising a computer readable medium having instructions stored thereon that when executed by a machine result in at least the following:

accessing an input name of a particular human culture;

accessing a stored name of the particular human culture;

selecting a first linguistic algorithm based on the stored name and other names in the particular human culture, wherein the first linguistic algorithm is based on one or more linguistic features including one or more of phonological features, orthographic features, semantic features, syntactic features, n-gram based features, the number of elements in names, the types of elements in names, variations in spelling of a name, accounting for exclusion of expected information in a name, positional information of names, inclusion of additional information in a name, and whether surnames match;

selecting a second linguistic algorithm, different from the first linguistic algorithm, based on the stored name and other names in the particular human culture, the second linguistic algorithm is based on one or more linguistic features including one or more of phonological features, orthographic features, semantic features, syntactic features, n-gram based features, the number of elements in names, the types of elements in names, variations in spelling of a name, accounting for exclusion of expected information in a name, positional information of names, inclusion of additional information in a name, and whether surnames match, wherein the first linguistic algorithm and the second linguistic algorithm are based on different linguistic features of the particular human culture;

comparing the input name and the stored name using the first linguistic algorithm;

comparing the input name and the stored name using the second linguistic algorithm; and

providing a non-binary indication of whether the input name matches the stored name based on (i) the comparing of the input name and the stored name using the first linguistic algorithm and (ii) the comparing of the input name and the stored name using the second linguistic algorithm."

5.   The pending claim are now 31-72 and 112.

Allowable Subject Matter

6.   Due to claimed features in the amended claims 31 and 112 with the applicants'

persuasive arguments, the claims 31-72 and 112 are allowed.

Reason For Indicating Allowable Subject Matter

7.   Claims 31 and 112 identify the distinct features, selecting a first and a second

linguistic algorithms based on an accessed stored name and other names in the

particular human culture and providing a non-binary indication of a comparison result

based on comparisons of an accessed input name and the accessed stored name by

the first and the second algorithms, are not taught or suggested by the prior art made of

records. The closest prior art, Oshika et al. ("Improved Retrieval Of Foreign Names

From Large Database", 1998, IEEE, pages 480-487) and Hermansen ("Automatic

Name Searching in Large Data Bases of International Names," 1985, a doctoral

dissertation) disclosing name matching by discovering an (cultural) origin of an input

name, fails to suggest the claimed limitations as mentioned above in combination with

other claimed elements. The above features in conjunction with all other limitations of

the dependent and independent claims 31-72 and 112 are hereby allowed.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joon H. Hwang whose telephone number is 571-272-

4036. The examiner can normally be reached on 9:30-6:00(M~F).

     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, JOHN E BREENE can be reached on 571-272-4107. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joon Hwang
Patent Examiner
Technology Center 2100

2/4/05

JEAN M. CORNELUS
PRIMARY EXAMINER